



USDA, National Agricultural Statistics Service

Indiana Crop & Weather Report

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CROP REPORT FOR WEEK ENDING OCTOBER 4

AGRICULTURAL SUMMARY

Some northern and central areas encountered frost on October 1st which potentially ended the growing season in late maturing fields, according to the Indiana Field Office of USDA's National Agricultural Statistics Service. Producers made little progress during the week as harvest was kept to a minimum due to unfavorably cool, wet weather. Corn and soybeans both continued the slow progression toward maturity. Harvest of seed corn, silage and vegetable crops continued.

FIELD CROPS REPORT

There were 3.9 **days suitable for field work** during the week. **Corn condition** is rated 61 percent good to excellent compared with 52 percent last year at this time. Ninety-two percent of the corn is in the **dent** stage compared to 99 percent last year and 100 percent for the 5-year average. Fifty-one percent of the corn crop is **mature** compared to 75 percent last year and 85 percent for the 5-year average. Five percent of the corn crop has been **harvested** compared to 14 percent last year and 24 percent for the 5-year average.

Soybean condition is rated 60 percent good to excellent compared with 49 percent last year at this time. Seventy-eight percent of the soybean acreage is **shedding leaves** compared with 88 percent last year and 91 percent for the 5-year average. Nine percent of the soybean acreage has been **harvested** compared with 35 percent for both last year and the 5-year average.

Six percent of the **Winter Wheat** acreage has been **planted** compared to 21 percent last year and 20 percent for the 5-year average. **Tobacco harvest** is 81 percent complete compared with 85 percent for last year and 86 percent for the 5-year average.

LIVESTOCK, PASTURE AND RANGE REPORT

Pasture condition is now rated 56 percent good to excellent compared with 23 percent last year at this time. Livestock remain in mostly good condition.

CROP PROGRESS TABLE

| Crop | This Week | Last Week | Last Year | 5-Year Avg. |
|-----------------------|-----------|-----------|-----------|-------------|
| Percent | | | | |
| Corn in Dent | 92 | 84 | 99 | 100 |
| Corn Mature | 51 | 31 | 75 | 85 |
| Corn Harvested | 5 | 2 | 14 | 24 |
| Soybeans Shedding Lvs | 78 | 63 | 88 | 91 |
| Soybeans Harvested | 9 | 3 | 35 | 35 |
| Tobacco Harvested | 81 | 70 | 85 | 86 |
| Winter Wheat Planted | 6 | 2 | 21 | 20 |

CROP CONDITION TABLE

| Crop | Very Poor | Poor | Fair | Good | Excellent |
|---------|-----------|------|------|------|-----------|
| Percent | | | | | |
| Corn | 3 | 8 | 28 | 50 | 11 |
| Soybean | 3 | 9 | 28 | 49 | 11 |
| Pasture | 3 | 9 | 32 | 46 | 10 |

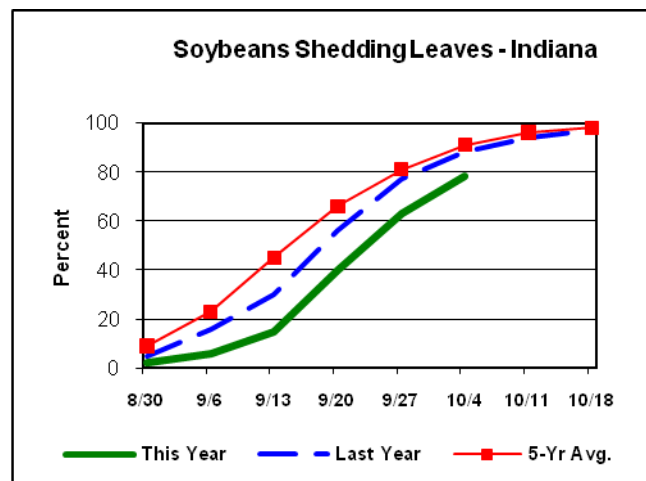
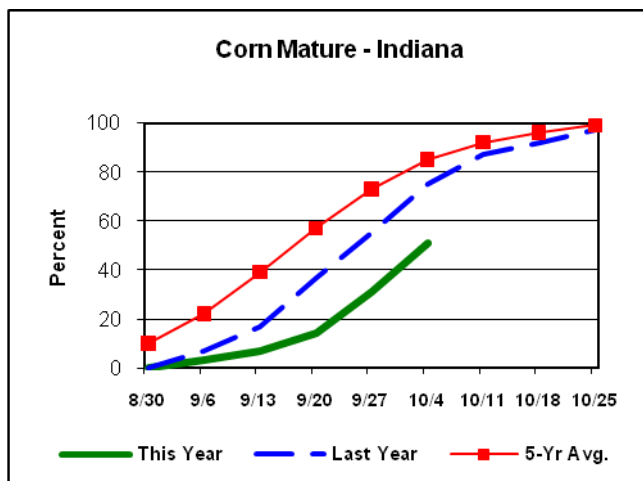
SOIL MOISTURE & DAYS SUITABLE FOR FIELDWORK TABLE

| | This Week | Last Week | Last Year |
|----------------------|-----------|-----------|-----------|
| Percent | | | |
| Topsoil | | | |
| Very Short | 1 | 3 | 18 |
| Short | 11 | 19 | 40 |
| Adequate | 70 | 58 | 41 |
| Surplus | 18 | 20 | 1 |
| Subsoil | | | |
| Very Short | 2 | 4 | 14 |
| Short | 20 | 22 | 37 |
| Adequate | 68 | 64 | 47 |
| Surplus | 10 | 10 | 2 |
| Days Suitable | 3.9 | 3.0 | 6.5 |

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Crop Progress



Other Agricultural Comments And News

Stress During Grain Fill: A Harbinger of Stalk Health Problems

Updated Sep 2009

URL: <http://www.kingcorn.org/news/timeless/StalkHealth.html>

Harbinger. [hahr-bin-jer] Anything that foreshadows a future event; omen; sign: Frost is a harbinger of winter. Dictionary.com. Dictionary.com Unabridged (v 1.1). Random House, Inc. <http://dictionary.reference.com/browse/harbinger> (accessed: September 01, 2008).

During the grain filling period of corn, developing kernels become a significant photosynthetic "sink" for the products of photosynthesis and respiration. Corn plants prioritize the movement of these photosynthates to the kernels, even at the expense of not maintaining the cellular health of the stalk, leaves, and roots.

The primary effect of severe stress on a corn plant (drought, heat, nutrient deficiency, leaf diseases, insect damage, hail damage, consecutive days of cloudy weather) is a reduction in photosynthetic rates. If photosynthetic capacity decreases significantly during grain fill, plants often respond by remobilizing stored carbohydrates from stalk and leaf tissues to supply the intense physiological demand by the developing grain on the ears. In addition to physically weakening the stalk of plants, remobilization of stored carbohydrates and/or the consequent lower cellular maintenance of root and stalk tissues increases the susceptibility of the plant to root and stalk rots.

NOTE: Even if significant stalk rot does not develop in such stressed plants, loss of structural stalk integrity itself greatly increases the risk of stalk breakage.

Fields at higher risk for weakened stalks and stalk rot development will be those where plants have managed to set fairly decent ears but have experienced severe stress during grain fill.

Common photosynthetic stresses that occur during grain filling in Indiana include drought stress, nitrogen deficiency, and foliar leaf diseases. The effects of dry weather during August on corn stalk health are accentuated where compacted soils restricted root growth earlier in the season or on sandy soils with minimal water-holding capacity.

Growers should monitor stressed fields in late August and early September for compromised stalk strength or the development of severe stalk rots and adjust their harvest schedules accordingly to harvest these fields early in the season to avoid the consequences of severe stalk lodging. In years where crop development is delayed, like in 2009, stalk quality problems often are not apparent until mid-to late September.

Stalk breakage itself is obviously easy to spot when scouting a field. However, compromised stalks may stand unnoticed until that October storm front passes through and brings them to their proverbial knees. The simplest techniques for identifying suspect stalk quality involve either pushing on stalks to see whether they will collapse or bending down and pinching the lower stalk internodes to see whether they collapse easily between your fingers. Sometimes the mere act of pushing stalks out of your way as you walk from one row of corn to another is enough force to collapse weakened stalks.

☺ TIP: Bending down repeatedly to pinch lower stalk internodes qualifies as an aerobic exercise.

Fields and/or hybrids at high risk of stalk breakage should be harvested as early as possible to minimize

(Continued on Page 4)

Weather Information Table

Week Ending Sunday October 4, 2009

| Station | Past Week Weather Summary Data | | | | | | | Accumulation | | | | | |
|-------------------|--------------------------------|----|-----|---------|-------|------|------|--------------------|-----------------|------|---------------|------|--|
| | | | | | | | | April 1, 2009 thru | | | | | |
| | Air | | | | | | | Avg | October 4, 2009 | | | | |
| | Temperature | | | Precip. | 4in | | | Precipitation | | | GDD Base 50°F | | |
| | | | | | Soil | | | | | | | | |
| | Hi | Lo | Avg | DFN | Total | Days | Temp | Total | DFN | Days | Total | DFN | |
| Northwest (1) | | | | | | | | | | | | | |
| Chalmers_5W | 73 | 35 | 53 | -8 | 1.34 | 5 | | 22.14 | -0.32 | 75 | 2609 | -462 | |
| Francesville | 73 | 35 | 53 | -7 | 0.68 | 4 | | 22.32 | -0.44 | 67 | 2554 | -261 | |
| Valparaiso_AP_I | 74 | 33 | 54 | -7 | 0.95 | 5 | | 18.74 | -5.77 | 70 | 2707 | -97 | |
| Wanatah | 75 | 32 | 52 | -7 | 1.24 | 6 | 58 | 22.91 | -0.74 | 76 | 2431 | -243 | |
| Winamac | 73 | 37 | 54 | -5 | 1.21 | 5 | | 19.01 | -3.75 | 66 | 2642 | -173 | |
| North Central (2) | | | | | | | | | | | | | |
| Plymouth | 73 | 34 | 52 | -8 | 1.52 | 6 | | 21.96 | -1.39 | 90 | 2561 | -401 | |
| South_Bend | 73 | 33 | 53 | -6 | 1.18 | 6 | | 25.08 | +2.40 | 69 | 2701 | -74 | |
| Young_America | 72 | 35 | 52 | -7 | 1.83 | 2 | | 21.98 | -0.09 | 54 | 2658 | -255 | |
| Northeast (3) | | | | | | | | | | | | | |
| Fort_Wayne | 74 | 35 | 55 | -4 | 1.16 | 4 | | 22.67 | +2.45 | 71 | 2835 | -77 | |
| Kendallville | 72 | 40 | 55 | -5 | 0.92 | 6 | | 20.07 | -1.23 | 85 | 2879 | +142 | |
| West Central (4) | | | | | | | | | | | | | |
| Greencastle | 70 | 38 | 54 | -8 | 0.49 | 3 | | 31.41 | +5.86 | 79 | 2659 | -630 | |
| Perrysville | 71 | 37 | 54 | -8 | 0.92 | 3 | 56 | 31.14 | +7.21 | 72 | 2959 | -99 | |
| Spencer_Ag | 75 | 41 | 55 | -5 | 0.42 | 2 | | 34.28 | +8.69 | 76 | 2964 | -118 | |
| Terre_Haute_AFB | 74 | 37 | 55 | -7 | 0.22 | 2 | | 23.14 | -0.99 | 63 | 3217 | -47 | |
| W_Lafayette_6NW | 73 | 35 | 54 | -6 | 0.63 | 2 | 62 | 25.78 | +3.31 | 69 | 2806 | -93 | |
| Central (5) | | | | | | | | | | | | | |
| Eagle_Creek_AP | 70 | 42 | 56 | -5 | 0.42 | 3 | | 29.19 | +6.67 | 72 | 3240 | +6 | |
| Greenfield | 70 | 40 | 54 | -7 | 1.26 | 2 | | 35.57 | +10.98 | 75 | 2879 | -233 | |
| Indianapolis_AP | 71 | 43 | 57 | -5 | 0.61 | 4 | | 32.57 | +10.05 | 70 | 3353 | +119 | |
| Indianapolis_SE | 69 | 40 | 54 | -7 | 0.91 | 2 | | 35.64 | +12.68 | 73 | 2878 | -351 | |
| Tipton_Ag | 73 | 35 | 54 | -5 | 0.90 | 4 | 65 | 26.88 | +3.98 | 76 | 2705 | -104 | |
| East Central (6) | | | | | | | | | | | | | |
| Farmland | 72 | 32 | 53 | -6 | 2.29 | 2 | 59 | 20.83 | -1.40 | 70 | 2748 | +6 | |
| New_Castle | 69 | 38 | 55 | -5 | 2.21 | 2 | | 27.41 | +3.88 | 72 | 2642 | -169 | |
| Southwest (7) | | | | | | | | | | | | | |
| Evansville | 76 | 42 | 59 | -5 | 0.60 | 1 | | 29.37 | +6.63 | 69 | 3808 | +58 | |
| Freelandville | 74 | 44 | 57 | -5 | 0.25 | 1 | | 37.10 | +13.41 | 71 | 3313 | -59 | |
| Shoals_8S | 73 | 38 | 54 | -8 | 0.58 | 1 | | 35.58 | +10.03 | 67 | 3016 | -255 | |
| Stendal | 76 | 44 | 58 | -5 | 0.63 | 1 | | 39.00 | +13.59 | 67 | 3702 | +169 | |
| Vincennes_5NE | 76 | 42 | 56 | -6 | 0.19 | 1 | 64 | 35.12 | +11.43 | 72 | 3445 | +73 | |
| South Central (8) | | | | | | | | | | | | | |
| Leavenworth | 71 | 43 | 57 | -5 | 0.96 | 2 | | 39.58 | +13.83 | 96 | 3339 | +92 | |
| Oolitic | 71 | 42 | 55 | -6 | 0.62 | 1 | 56 | 32.23 | +7.78 | 79 | 3062 | -59 | |
| Tell_City | 75 | 46 | 59 | -5 | 1.06 | 1 | | 30.34 | +4.33 | 64 | 3613 | -15 | |
| Southeast (9) | | | | | | | | | | | | | |
| Brookville | 70 | 38 | 57 | -3 | 0.60 | 2 | | 28.75 | +5.07 | 70 | 3110 | +147 | |
| Greensburg | 71 | 42 | 56 | -4 | 1.29 | 1 | | 35.55 | +11.63 | 76 | 3240 | +208 | |
| Seymour | 70 | 40 | 55 | -6 | 0.95 | 1 | | 36.81 | +13.47 | 65 | 2993 | -119 | |

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DFN = Departure From Normal.
GDD = Growing Degree Days.
Precipitation (Rainfall or melted snow/ice) in inches.
Precipitation Days = Days with precip of .01 inch or more.
Air Temperatures in Degrees Fahrenheit.

For more weather information, visit www.awis.com
or call 1-888-798-9955.

Stress During Grain Fill: A Harbinger of Stalk Health Problems (Continued)

risk of significant mechanical harvest losses. Recognize that hybrids can vary greatly for late-season stalk quality even if grown in the same field due to inherent differences for late-season plant health or resistance against carbohydrate remobilization when stressed during grain fill.

Another side-effect of late-season stress during grain fill is the greater risk of premature kernel black layer formation. In 2009, foliar diseases like gray leaf spot (*Cercospora zeae-maydis*) and northern corn leaf blight (*Exserohilum turcicum*) developed late in the season (some say, exploded) and destroyed much if not all of the green leaf tissue before the grain had matured. Such destruction of green leaf tissue, in addition to encouraging the remobilization of stored carbohydrates from the lower stalks, also predisposes the grain to premature kernel black layer formation. The consequences of premature kernel black layer include not only lower grain yield, but also the likelihood of lower test weight grain.

Related References

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